INTERNATIONAL

BI-METALLISM:

AN ESSAY:

[Being one of the Thirty-nine Essays submitted to the *Concours-Cernuschi* in May, 1890.]

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PREFATORY.

IN September, 1889, M. Cernuschi proposed, at the Paris Monetary Congress and simultaneously in "The London Times," the adoption of a compromise system of bi-metallic money, based on the dual units, the gold dollar of the United States, and the silver five-franc piece of the Latin Union.

In common with all thorough bi-metallists, M. Cernuschi held, that, though, the true solution of that gravest of all the problems of Money, *Stability of Standard* is to be found in bi-metallism, nevertheless the full benefits of the bi-metallic or bi-commodity principle are only attainable through the adoption of a common or uniform legal ratio by all double-standard nations.

Unfortunately, the two principal double-standard systems of the world, have not, and never have had, identical legal ratios.

The infinity of contracts which have been entered into for the delivery of the commodities, silver and gold, in differing proportions, or at ratios which mutually exclude each other, under those two money systems, make the task of changing from existing legal ratios to a common ratio, a somewhat formidable one.

But the very definite and very practical plan proposed by M. Cernuschi, for the accomplishment of this object, probably presents fewer obstacles and combines more advantages than any other scheme that could be devised. Indeed, its merits are so great, and the attainment of its ultimate aim, namely, *unity of ratio*, are of such transcendent importance, that I am strongly impressed with the belief that it ought to be, with some degree of fullness, presented to the world, and especially at the present time to the people of the United States.

The following essay is an attempted exposition of the new system; and is one of the thirty-nine essays submitted to the "*Concours-Cernuschi*" last May. It is now published with the hope that it may, in some slight degree, aid in clarifying a question which Jevons declared a quarter of a century ago, was then a "burning question"—as it is to-day: for, never was it more earnestly or widely discussed than at the present time.

The issues dependent on the stability of the relations between the two great money metals of the world (—formerly rated the one to the other, and afterwards bound together by the currency laws of France—but now, and since 1873-4, drifting independently of each other, dividing mankind into two separate and more or less antagonistic groups—) are so far-reaching, and the material interests affected thereby are so vast, that no settlement can ever become permanent, which is not a just, a right—and a scientific settlement. For, I hold, (and I think I have shown in the following essay, pp. 18–20,) that there is such a thing as scientific bi-metallism, exactly as there may be scientific mono-metallism. In politics, the United States illustrated in practice as well as theoretically more than a century ago, the truth of the maxim: *E Pluribus Unum*; so in finance, long ago France abundantly proved that unity from duality—*E Duobus Unum*—is equally a possibility, and that the principle she thus illustrated is of immense practical utility to the human race.

Of the other essays submitted to the judges appointed by M. Cernuschi to be passed on on their merits, concerning which no general report has yet been made, that of Baron van Rochussen of the Netherlands, which was awarded the prize, is published in French, and may be obtained of Sampson, Low & Co., London; and that of M. Laveleye of Belgium, also presumably in French, is soon to be published.

It should be noted that the computations of the gold price of silver in the following essay were based on the price current at the time it was written, to-wit: the early part of last year. I have added also some notes in an appendix, in explanation of certain points which seemed to demand further elucidation.

LOS ANGELES, Jan. 20, 1891.

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ERRATA.

Page 23,	line 35,		read	(gold's)
" 26,	" 29,	for measures,	"	measure.
" 27,	" 25,	" on whatever,	"	or whatever.
" 29,	" 14,	" maximum,	"	minimum.

INTERNATIONAL BI-METALLISM.

In undertaking with others, at the invitation of M. Cernuschi, to forecast "what effect would be exerted, immediately, and in the future, on the paying power of silver, and on the paying power of gold, by the simultaneous adoption in England, France, Germany, and the United States, of a bi-metallic 'Just,' as legal tender for any amount, the silver *just* having the weight and fineness of the silver five-franc piece, the gold *just* having the weight and fineness of the United States gold dollar, with mintage free to everybody, and gratuitous,"

I should say:

(1) That the immediate effect would be,

(*a*) To give to the silver just and to the gold just, absolutely equal paying power in all contracts for the delivery of money entered into after the adoption of said system in the four countries named; and

(*b*) To cause, through the right of free-coinage, the universal masses of silver and gold to gravitate towards the proposed ratio of value of 1 to 14.95+; and this movement would, moreover, be likely to commence at once, on the first indication of a serious intention on the part of those nations or of a majority of them, to adopt the proposed system,

(2) That the future effect would be to bind the two metals to this ratio, "as with hooks of steel," in perpetuity, or so long as the quadruple alliance or convention should endure.

The parity of value at said ratio, of silver and gold as commodities, being firmly established, by the play of the bi-metallic law, the purchasing power and paying power of the silver just and of the gold just, would become substantially identical, not only in the four countries named, but throughout the world.

Recognizing that mere off-hand and unsupported assertions or forecasts, made without regard to the reasons on which they are based, are of little worth; and assuming that a very important part of the task which we are invited to undertake by M. Cernuschi is to show

clearly and indisputably, that the material interests of the people of England, France, Germany, and the United States would be substantially and permanently benefitted, by the adoption, in good faith, by each and by all those nations, of the bi-metallic system proposed by him, it will be my aim to show, as succintly as possible :

(1) Why a bi-metallic, or, using a broader generalization, why a bi-commodity standard is superior

(*a*) To a mono-metallic or single-commodity standard ; or

(*b*) To a multiple-standard ; or,

(*c*) To the original form of exchange—of which all these are but variations—to-wit : primitive barter ;

(2) To explain the theory by which it is possible to hold two universal commodities in substantial equilibrium, at some agreed ratio, whereby the vast steadying power of *two* grand masses (instead of one) may be concurrently and effectively exerted on the standard; and,

(3) Point out the principles which should govern in the adjustment of existing contracts for the payment of money, in the four countries named, to what may be called

THE "JUST" SYSTEM,

so that in the proposed change, the name of the new system may be vindicated in its methods.

In discussing in detail, the various phases as outlined above, of M. Cernuschi's proposition, I propose to dive down to fundamental principles, so that at all stages of the work in hand, I may be, so far as possible, absolutely sure of my bearings ; and thus, not only avoid self-deception, but also escape the imputation even, of seeking to mislead others.

Before proceeding further in this discussion, I deem it proper to pause an instant at the threshold, to point out a very vital distinction, one on which this whole question hinges, namely, that *all measures of value are perpetually changing;* and that in this respect they differ fundamentally from measures of extension, weight, time, etc., with which they are usually classed, but which are supposed never to vary.

I merely briefly state this proposition here, leaving the matter to be hereinafter further elucidated.

Primitive Barter—Evolution of Money—Comparison of Standards.

All exchange, from its simplest manifestations to its highest refinement, is only some form of barter or dicker. Good things, that is, things having value because useful or beautiful, or desirable for some quality they possess, are exchanged or bartered for other good things, in definite or measured quantities.

There may be, theoretically, many forms of barter; but in practice these may be reduced to two principal forms, namely, heterogeneous and unified.

Heterogeneous barter is the original and simplest form of exchange. By it, good things are exchanged promiscuously and directly without the aid or intervention of any common standard of valuation.

But as society advances from the primitive to the complex, the necessity for such a common measure of value, by which all property may be compared or gauged, and exchanged, constantly forces itself on people; and they adopt sometimes one commodity and sometimes another as such common measure. That is to say, they use the ordinary, and as near as may be, uniform value that one commodity happens to have, to measure the values of all other commodities.

This is termed unified barter because all values are gauged by the value of some one or more representative commodities.

The value of the commodity thus used, is simply its general, commercial or merchandise value, which general value is, in reality, based on all the uses whatsoever of such article. This particular use of a good thing as a measure of value of other good things, is called its *money* use; but this money use of an article, is, after all, only one of the many commercial, or, broadly speaking, commodity uses of such article. And it should never be, though it often is, forgotten, by the student of monetary science, that the use of an article having commercial value, as money, does not in any sense, make that article any less a commodity, because so used. (Appendix A). This money use, may indeed become its most important use; and in fact it may happen, that the creation of a new use, or of a largely increased use, of an article, thus creating a new demand for it, may, and sometimes does, enormously increase its value. (Appendix B).

Wheat, for example, has many and legitimate uses as a food staple: if besides, people should, by common consent, conclude to use it as money (by means of warehouse receipts or otherwise), its value would thereby be greatly enhanced; but wheat would not cease to be a commodity because thus used as money; nor would its money

use be less a commodity use, than its use as food. Nor could wheat in such a case, except by some artificial or unnatural and unhealthy process, have two differing values, i. e. a merchandise or commercial value, and a money value; for these values are, or ought to be, always identical in potential money.

These, to the political economist, are but trite truths: but it has seemed desirable to recur to them from the standpoint of primitive barter, as preliminary to a further consideration of the evolution of money; and also to fortify ourselves against certain popular illusions concerning money, in which so many indulge, apparently because they think it a very abstruse science beyond their comprehension, or because they neglect to study it in connection with fundamental principles.

It is a useful practice, to substitute in theory, other commodities in place of those ordinarily used, as money, and suppose exchange to be carried on, by using their simple merchandise value, as a common measure of other values. (Appendix C).

It may also prove helpful, in the present discussion, to keep in mind the maxim, that both parties to every exchange, *are both buyers and sellers*: the farmer in the same transaction, *sells* his produce and *buys* specie; the merchant *sells* his merchandise and *buys* cash, or farmers' produce,—measuring in the latter transaction, the value of both produce and merchandise, by the value of the cash, as a convenient medium or common measure of value of both the produce and the merchandise.

Grave Evils of Single-Commodity Standards.

Whilst the logic of evolution in exchange points with unerring certainty to the unification of barter, as man advances towards the higher civilization, it is also true, as experience amply teaches, that there are grave evils inseparably connected with the use of a single commodity as a sole measure of all material values, which are scarcely known in promiscuous barter. Although the methods of this latter form of exchange are rude and cumbersome, yet by them the entire sum of values of every species of property, is not subjected to the fluctuations of a single commodity, as they unquestionably are, in unified barter, where one metal is alone the standard. The gravity of this evil can hardly be over-estimated, as I shall endeavor to show.

I also hope to be able to demonstrate, that whilst unified barter based on a single commodity, facilitates enormously the distribution of the vast benefits growing out of the utilization of the newly-dis-

covered forces of nature, steam, electricity, etc., nevertheless this distribution is inevitably vitiated and marred by the changes,—imperceptible perhaps, but none the less real—of the commodity on which such standard is based.

Mr. Goschen, the eminent English financial economist and statesman, is reported to have said at the Paris Monetary Conference of 1878, that it would be dangerous for all the world to adopt a single commodity (gold), as a universal monetary standard. The recognition and enunciation of this pregnant truth, show the subtlety and profundity of his intellect.

In the gold standard countries alone, which probably include less than one-third of the human race, it is a startling fact that more contracts are made for the delivery of that commodity *daily* than there is gold in the world, possibly several times over! And although gold is what may be called "quick capital," and the same gold may be, and often is, used as money over and over many times in the same day; and although its functions may be greatly multipled by the mobilization of credit (bonds) into currency, and by the use of cheques and promissory notes, etc., whereby the actual delivery of gold is postponed or pushed into the future, yet, is not that system of exchange beset with collossal dangers, which encourages, nay, rigorously requires the delivery daily, even in theory, more of a single commodity than the total aggregate thereof in all the world?

Is it strange that commercial crises and their attendant train of disasters, constantly menace those countries where such practices are the rule? (Appendix D).

Man has used at various periods in the world's history, all sorts of things having value, and often things having no intrinsic value, as common measures, and media or inter-media of exchange, only to discard most of them, because of their unfitness to perform the functions of money. It is not necessary here to recount the things thus used, nor the infinite variety of reasons which have caused them to be rejected; all this information can readily be found in the books.

Silver and Gold.

Silver and gold, which are, comparatively speaking, imperishable metals, ages ago, through their intrinsic qualities, fairly earned the right to be called "the precious metals," as they no less honestly and fairly earned the commanding position—now unchallenged—of being the metals or commodities best fitted to serve as instruments or tools of exchange, if not in every respect, the most stable or non-fluctuating standards of value.

For, silver and gold, like all other commodities, are subject to the inexorable law of supply and demand : their use as money in no wise exempts them from the operation of this universal law. They fluctuate in value as do other commodities, in strict obedience to that law, although their movements may be at long range, so to speak, and difficult of detection, as is the motion of the earth on which we stand.

For centuries, even learned men and philosophers, could not be made to believe that our earth did move ; to assert that it did, seemed to them, a flat contradiction of the evidence of their senses.

Their attitude on that question, was not unlike that held to-day by many, including large numbers of learned economists, concerning the variability of gold and silver as standards of value.

It seems next to impossible to convince people in gold-standard countries, that gold fluctuates in value, and, that their standard fluctuates with it : for do not the daily variations in the market prices of all the things measured by it furnish conclusive evidence that they are perpetually changing in value ; whilst the price of gold bullion never varies : the self-evident fact being lost sight of, that anything measured by itself cannot show a change. The standard being gold it would be as absurd to say that its own price of itself, does, or can vary, as it would be to suppose it even possible for the price of full-weight, perfect. twenty-dollar pieces to vary when exchanged for other perfect, full-weight twenty-dollar pieces ; or for the price of perfect English sovereigns to ever change when measured by other full-weight sovereigns.

In like manner it is not an easy matter to convince even intelligent people in silver-standard countries that silver fluctuates and that their standard changes with it : for do not the daily market prices of everything by the silver-standard furnish perennial evidence that all the endless list of things bought and sold—gold included—is constantly changing in value as compared with their standard ; .whilst the price of silver, by that standard, never varies ?

The world has got past the delusion of believing that the earth does not move, because it does not *appear* to move ; but not all the world, either in silver countries or in gold countries, has risen above the delusion that the standard of value of each respectively, is a fixed and never-varying measure of valuation.

There are examples without number of learned men in Europe and America, who still laboriously seek to account for the contemporaneous fall of the gold prices of silver, and of staple commodities, since 1873, of from 28 to 30 and 35 per cent., on some other theory than that of the appreciation of gold ; although they cannot well put

out of view the fact, that a rise, in the standard logically and always registers itself by a general fall in prices, and that it can register itself in no other way.

And I suppose the learned Parsees, if not all the people of India, with equal confidence, and with much more reason, account for the great rise in the single article of gold (as that is the only commodity that has shown any serious change in price during this period), by some other theory than that of the depreciation of silver.

We may, however, in this discussion, offset one delusion with the other. The indisputable facts with which we have to deal, are, that since the rupture of the tie which for so many years bound silver and gold together, there has been going on a steady and persistent divergence between the two metals, till within the last year or two, silver, as measured by gold, has fallen from a par of 100 to 70 or 69 or less; or, conversely stated, gold, measured by silver, has risen from 100 to 142 or 145. And also, at the same time, a change has been going on in the relation between gold and the staple commodities of the world, which may be expressed with equal precision according to two formulas, thus: The average gold price of commodities has fallen during the last seventeen years more than 30 per cent.; or, the commodity price of gold has risen something like 45 per cent.

The 412½ grains of silver in the United States standard silver dollar, which, prior to 1873, was worth in gold about 103 cents, fell, in May, 1888, to less than 71 cents, as measured by the gold dollar.

In India, prior to 1873, 1,000 rupees would buy very nearly 100 £ in gold, whilst now, considerably more than 1400 rupees are required to buy the same quantity of gold or of gold exchange.

Reasoning *a priori*, it is pertinent to ask, why we should make all our material values dependent on either silver or gold, in preference to many other durable and useful commodities, which, having world-wide sources of supply, and infinite variety of uses, have great stability of value?

Considering the question of stability or steadiness of value (which is of the greatest gravity), apart from that which relates to the peculiar fitness of a metal to serve as money on account of its portability, divisibility, indestructibility, etc., why, for example, do not the broad and stable bases on which the value of iron, copper, tin, nickel, etc., rest, make some one of these metals, a more constant and reliable standard of value, than either gold or silver, whose uses, aside from their monetary uses are mainly, or at any rate, to a large extent, ornamental? That is, the values of the latter, so far as they are steadied or sustained by their non-monetary uses, depend very much upon man's

æsthetic wants and whims, which are often capricious and variable, rather than on his necessities, which are both imperative and constant. Of course the baser or heavy metals could only be used as money by means of warehouse receipts or certificates, and even then, the ever-impending necessity for materialization, would be a bar to their usefulness in this capacity.

But, on the other hand (leaving to one side for the moment, the question of stability of value), gold, for example, has some points of superiority over all other commodities. It has condensed value in small compass. In this one respect, however, diamonds and precious stones are superior to gold. But their value is variable because their use is subject to the freaks of fashion. They have few non-monetary uses to assist in giving them a stable value; and they are incapable of that infinite and precise divisibility which is required of all material that may be used as money.

Gold possesses all these and many other qualities, in common with silver, which, as already pointed out, peculiarly fit both these metals for use as money; and gold, because its value is more condensed than that of silver, is of course in this one respect, and in no other, superior to silver.

But this very fact, which is freely conceded here, has a very important and direct and ominous bearing on its stability. Because, e. g. one ounce of gold will do the work of 15½ ounces of silver, men naturally prefer it: but the expression of this preference, by increasing demand, causes appreciation, thus destroying stability, which latter quality is of vastly more importance than the mere matter of portability, that is within reasonable limits; for the difference of weight in proportion to value, between silver and gold, is practically eliminated by the use, in the great body of modern monetary transactions of the paper representatives of both those metals, in place of the metals themselves.

When the people of a country change from old systems of weights and measures, to the simpler and better metric system, the integrity or constancy of the measuring function of the meter and the gramme, is in no wise affected by their increased use, and would not be one iota, if adopted by the whole world. But when nations or large communities propose to themselves the adoption of any single commodity as their sole measure or standard of value, it behooves them to inquire:

(1) What effect their own increased use of the commodity selected, will exert on its value or measuring power; and,

(2) What will be the effect, if other communities and other nations shall conclude also to adopt the same commodity as their sole standard.

This I take it is the pith of the query propounded by M. Cernuschi, which goes to the core of the present monetary situation.

Will the *value* of the unit, which is what measures value (as contradistinguished from its weight and fineness), based on an article thus concurrently adopted, by several countries, or by all the world, preserve the same relation to all other property that existed before such adoption? Unquestionably, that relation must be disturbed: and the disturbence must be in exact proportion to the increase of demand for the new money material.

Is it probable that the financial economists and statesmen of those nations of Europe and America which, since 1871 have changed from silver to gold, or from paper to gold, took into account the influence on the value of gold, and the consequent effect on its measuring power, which their combined adoption of it as their standard must have exerted? Is it not evident that they merely provided for the weight and fineness of their gold coins and left the question of their measuring power to take care of itself?

It may be replied that their functions as economists and legislators ended there. To which the sur-rejoinder I think is pertinent: That it is the business of the theorist, and of the legislator who enacts theories into statutes, to take cognizance of all the elements involved in their action, and the practical bearings thereof, when they assume the responsibility of shaping the policy of a country, especially in so important a matter as a change of its fundamental standard. And this is precisely the rule which advocates of bi-metallism propose for their own guidance, and by which they are willing to have their theories and their arguments judged.

A Multiple Standard, or a Standard of Desiderata.

Whilst a standard based on a large number of commodities that have intrinsic values, would be more stable than one having a single or a dual basis; and whilst such a standard can be and often is made to serve many useful, theoretical purposes by the student or statistician; it is impracticable as a sole basis of an actual money system, because chiefly, it cannot be materialized at all times on demand,—which is an imperative (though sometimes a very inconvenient) necessity of all real money.

When a person promises to deliver definite quantities of innumerable commodities, he simply makes promises which, as a rule, he cannot perform: he unnecessarily burdens himself with the task of hunting up many articles of commerce which may not be obtainable; and embarasses his creditor by imposing on him things he does not want, and which he would not know what to do with if delivered to him.

An alternative multiple-standard based on many commodities, would be exceedingly complicated, and if attempted to be put in actual practice, would almost certainly lead to endless confusion.

Fully conceding ther,

(1) That the tendency towards the unification of barter is legitimate, as well as irresistible, because a necessity; and,

(2) That a standard based on a single commodity, whatever that commodity may be, is inseparably beset with evils of the gravest and most insidious character, because those evils are veiled; and,

(3) That a multiple-standard as the basis of a money system, adapted to the every-day needs of mankind, is impracticable, we come back to the question:

A Bi-Metallic Standard.

Why is a bi-metallic or bi-commodity standard which, in reality, is a compromise between heterogeneous and unified barter, better, both as a measure of value, and a vehicle of exchange, than any or all other standards?

In attempting to answer this question, adequately, in all its varied bearings, it may conduce to clearness, to first elucidate, briefly, the theory by which the play of the economic law of the constant oscillation of all commodities in their relations to each other, can be so controlled or modified as to admit of two of them (as for example silver and gold), being substantially and permanently bound together at some fixed ratio.

It is not pretended that this desideratum of practical money can be realized in defiance of the law of supply and demand; on the contrary, it is only through strict obedience to that law that such union can be made permanent.

The simple secret—if indeed it be a secret at all—at the bottom of this much-distrusted, but nevertheless sound principle, consists in regulating "demand" in such fashion that—under the stimulus of that universal motive of human action, self-interest—it shall automatically correct inequalities or variations of "supply."

It is a familiar axiom throughout the commercial world, that when one of two articles of the same kind, of equal value (or of different kinds but capable of performing exactly the same service), can be bought at a less price than the other; or, what is the same thing, if, for any cause, real or fanciful, one of the articles commands a premium, no matter how slight, the buyer will, as a rule, prefer the cheaper, all other conditions being equal.

As a mere proposition in simple barter, thoroughly consonant with common sense, it is safe to assert that any person having use for silver or gold, either one of which, at the established ratio, will equally well perform the service he requires of it, will, without exception, if no legal or moral obstacles intervene, choose the cheaper metal, or that one for which he has to pay no premium.

The beneficent effects of this perfectly natural and perfectly just rule of action, in connection with the simple principle of equal legal-tender, when applied to bi-metallic money, on the material interests of a country adopting the same, are manifold.

Whenever one metal, for any cause, shows a tendency to go to a premium, the average buyer or user of coin, rejects it and chooses the other, because, at the standard ratio, both metals are presumed to be of equal legal value, and therefore of equal paying power: the contracts to be thus liquidated, of course being made under these implications.

In law and in morals, one metal will serve his purpose exactly as well as the other.

Of course, mere sentimentality or fanciful preference, has nothing to do with determining his choice—his decision being governed wholly by self-interest.

Thus the standard which, without the influence of this compensatory action, would have followed the higher specie, causing it to go still higher, is steadied by the operation of a natural and altogether salutary law: demand for that metal which, from over-supply or other cause, might tend, without the privilege of this option, to drift away from, and below the common ratio, would be effectively stimulated, and its value thereby enhanced; and the other metal, which from a variety of causes, real or fictitious, might tend to drift away from and above the ratio, would be in less demand, becoming idle capital, earning its owner no interest, etc., which would cause it to decline in value, or in other words, to assimilate again to the legal ratio; and thus, by reciprocal action and reaction, unequal supply and demand would, by operation of natural law, correct each other; and the two metals, being in vital connection and doing interchangeably each the

work of the other, automatically, (the cheaper, under the law of self-interest, being always in greater demand,) would be welded together in one fungible mass, which would be vastly less liable to fluctuations than is either silver or gold alone, when the two do not exert this reciprocal influence on each other.

An Object Lesson.

Fortunately, the world has had an object lesson, which thoroughly and luminously illustrates the practical workings of this theory.

For seventy years or more the industry and commerce of the French nation, thanks to the acute instincts of her people or of the shapers of her economic policy, both profited by and exemplified a principle which, inasmuch as it was subjected to the severest tests, fully demonstrated its soundness, and proved itself to be of the highest economic value, to the human race.

France, during those seventy years, as well before and since, absorbed raw materials from the four quarters of the globe, and fabricated them into useful articles of commerce, and, after supplying from these, her own necessities, returned the surplus, increased in value, five, ten, twenty or an hundred fold, to the outside world and to the countries which furnished the raw materials.

These processes, of course, are practiced by all highly-developed nations; and they are lubricated and stimulated all along the line both ways, by profits. And it is well that it is so; because it is by the manipulation and conversion of the crude products of the earth into highly specialized, useful fabrics, that these same products are made serviceable to man: it is by these means that his highest material welfare is promoted.

But France advanced one step beyond her neighbors: she extended this beneficent process of the conversion of raw materials to *both* the precious metals, silver and gold. In obedience to the demands of commerce, she fabricated both these metals into such forms of use and beauty (as she did wool, cotton, silk, and all the endless list), as should give them sale and currency throughout the world.

That this particular branch of manufactures was (for good reasons) performed by the government itself, does not in the least destroy the analogy I suggest, namely, that the French nation converted ores containing the precious metals, as she did textile and other crude products, into their highest types, or into such forms as should make them wanted by all the world.

All her varied domestic industries and foreign commerce, contributed directly or indirectly, as well as legitimately and profitably, to this conversion of the precious metals.

Even though gold and silver traveled from mines in distant lands, by round-about routes, they both, silver as well as gold, as if drawn by a magnet, gravitated at last to the French mints, where they were freely refined and fabricated into forms which best adapted them to their most important, to-wit, their monetary uses. The coins thus manufactured, did not necessarily go back to pay the miner at the antipodes for his ores; nor even to Swansea or Freiburg to pay for their reduction or extraction: for all these obligations were, as a rule, liquidated by an infinite variety of other French fabrics, on which profits were realized; but, by the simple principle of equal legal-tender, the coins of both metals circulated freely, side by side, on an equal footing, gauging equal values throughout France: meanwhile performing the double function of facilitating and stimulating French industries both domestic and foreign, and of holding in equilibrium at a serviceable fixed ratio, the great money-metals of the world, to the manifest advantage, not alone of France, but of all other civilized nations as well.

For it is certainly a matter of the first importance to the people of silver countries and of gold countries, that their money systems should be kept in touch or equilibrium, as thereby a *modus vivendi* between the two, is maintained without unnecessary friction, and the world's commerce is immensely facilitated.

Every considerable change between the relative values of silver and gold, not only involves a general disturbance or dislocation of prices, in each silver-standard and in each gold-standard country, but also necessitates a readjustment on a vast scale, of prices as between silver countries on the one hand, and gold countries on the other.

One great special advantage derived by France from her long maintenance of the equality of the standards, was that in the vast aggregate of contracts made and accruing daily for the delivery of money, she had *two* universal commodities to draw on, instead of being confined exclusively and rigorously to *one*, as was, and still is the rule in all single-or mono-metallic countries, whereby she escaped the ever present *bete noir* of the latter, namely, "a corner in money," which is the perennial source of commercial misery and ruin.

Moreover, the circulation, side by side, throughout France, of the silver franc with the gold franc, or their multiples, worked no hardship or wrong, actually, and could work none on her people, whilst their parity, both as coin and as bullion—in other words as money,

and as merchandise—was maintained: for in law and in equity, so long as their value was equal, their paying power continued equal.

Furthermore, the payment by France of her obligations abroad, mostly in other manufactured articles than those of the precious metals (coin), was rather a benefit than a disadvantage: because, while the government made little or no immediate profit in the manufacture of coin, many citizens were enabled to realize good profits on the innumerable other fabrics which were sent abroad, in lieu of coin, in payment of the raw materials of every kind, gold and silver ores included, which were drawn from all quarters, to feed the thriving industries of an enterprising and enlightened nation.

The French people were very well content to pay thus their debts to the outside world with fabrics on which there was a profit, and retain for themselves the perfected products of the mines, to-wit, the manufactured coins of silver and gold of the realm, which were virtually the most acceptable "merchantable form" of those commodities. (Appendix E).

Why other enlightened nations which sought to develop to the highest degree of perfection, their manufactures and commerce did not imitate the wise and beneficent example of France, and include silver (as well as gold and all other materials), in the list of articles which they fabricated into their most saleable forms, when the advantages of such a course, both immediate and remote, were so obvious, passes comprehension.

As a defect in the *manufacturing* policy of those nations, this neglect was inexcusable: for every country of highly developed and highly specialized industries, one would say, should seek to manipulate and convert into its most desirable merchantable form, every useful imported product of nature that is wanted by man; and not be compelled to send any article abroad and ask another nation to further transmute it so as to fit it for its principal use, as most of the nations of Europe, for nearly three-fourths of a century, sent silver to France to be there converted into money (as the only alternative of sending it to the far East), because they had not the genius or courage to do it themselves.

As a defect in *fiscal* policy, it was unaccountable: for if France almost alone was able to confer the great boon on the world of making the ligature, binding the great masses of silver and gold together, and to her standard, effective, for seventy years or more, and during all that period greatly profited thereby, certainly there could have been no risk for other nations to have coöperated with France in making

such a beneficent policy (—i. e. if to contribute to steadiness of the measuring power of money is beneficial—) the permanent policy of the leading powers of Europe and eventually of the world.

For the experiment made by France alone for over sixty years, was abundantly justified by its results, which were indeed simply marvelous. Gold-using countries have never yet fully appreciated the debt they owe to France for saving their standard from the appalling fall that must inevitably have resulted from the sudden addition to the stock of gold in the hands of man, of a larger quantity than he already possessed, from the alluvial or placer mines of California and Australia; and which amounted in twenty-five years (1850–'75) to the enormous sum, according to the eminent statistician, Soetbeer, of over three thousand million dollars, or fifteen thousand million francs.

The steadying influence on the value of gold, of effectively connecting it with the grand mass of silver, which latter has a very constant and solid value, because it is guyed or made fast, or anchored to the material values of nearly three-quarters of the human race, is of transcendent importance; and this truth was never more impressively illustrated than by the example cited above.

The doubling of the money of gold-standard countries, should have caused, according to every conceivable economic probability, a fall in the relative value of gold, of something like 50 per cent., and a corresponding rise in the prices of everything measured by that standard, of 100 per cent.; in other words, a general distortion and dislocation of prices in all gold-standard countries, such as the world had never known.

That this did not happen is solely attributable to the fact that gold, during this period, was tied to silver by the French currency law of 1803. Of course, the latter metal fell with, but powerfully retarded the former, in its downward movement; and instead of a decline of gold, separated from silver, of 50 per cent., the two metals, bound together, only fell, as carefully and elaborately demonstrated by Jevons in 1869 (Currency and Finance, p. 157), about 15 or 16 per cent. below their normal relation to staple commodities: whilst its (gold) divergence from silver was very slight.

Whereas, gold alone, since the rupture of the link binding it to silver in 1874, has risen, as compared with silver and with the world's staple commodities, from 40 to 45 per cent. And if we take into account the cumulative fact, that the fall of gold, under the influence of the addition of $3,000,000,000 new gold, was only 16 per cent.; whilst the new demand for gold since 1873 (caused by countries

changing from silver or paper to gold since that date), of only \$1,000,000,000, has caused a rise of over 40 per cent., the proof seems conclusive as to the immeasurably greater stability of the bi-metallic standard over the single gold standard.

By contrasting the slight disturbance of the monetary standards of the world, caused by the enormous influx of new gold during the period, 1850–'75, with the rise, nearly three times as great, during the period 1873–'88, under a new demand for one-third less gold than the former new supply, we can see in clear outline how appalling are the fluctuations of gold, even in comparatively short periods, when its movements are wholly unchecked by silver. And we also see how silver, when wholly disconnected from gold, seems to be much more stable in value than the latter, as compared with all other commodities, probably because its bases are nearly three times as extensive as those of gold : i. e. it is used by nearly three times as many people as a measure of value.

I am well aware that there is a very general and a very decided disposition amongst large numbers of economists in gold-standard countries, to deny that the operation of the universal law ot supply and demand affects (ultimately, if not instantaneously,) the value of gold precisely as it does every other commodity.

If the people of those countries measured values by silver instead of by gold, probably they would more readily see and concede the truth of this maxim.

But trained political economists, thinkers deserving the name, philosophers who make a study of monetary science, one would say, ought to be able to follow out sound theories to their necessary conclusions, absolutely without regard to which monetary standard they may have been accustomed to. True philosophy cannot afford to thus hobble on crutches : she will not permit her votaries to plead accidents of environment, as excuses for defective logic. For, as Cormenin, with scornful elegance, said of the orators of France: "*It is by logic only they can hope to live*": a profound truth which orators and authors should ever keep in view.

It is the glory of modern astronomers that their theories concerning the solar system and the relation of our earth to that system, are not vitiated in the least by the fact that they happen to be inhabitants of this earth, and have never as yet been able to climb to any other world (except in imagination), and verify by observations from thence that this world, of a truth, has a dual motion, as they have learned to believe, contrary to the evidence of their senses.

Variability of Standards of Value.

No economic principle is more thoroughly settled than that all commodities whatsoever, silver and gold included, are constantly fluctuating in value, because all are subject to varying conditions of supply and demand. Inasmuch as the operation of this universal law of variation of value, as already pointed out, is deceptive when applied to the commodity used to measure other things by: as the commodity thus used, when measured by itself, shows no change; and as all other things measured by it constantly reveal variations in value, relatively to the standard and to each other, according to the general law; and, in fine, as by measuring silver by gold, and gold by silver, we find that there is no exception to the rule, we are led to ask: Is gold, is silver, is *any one* commodity sufficiently stable in value from year to year or from age to age to justify its adoption as a universal standard?

It is not alone the exact weight and fineness of the silver or the gold in the franc, mark, dollar or sovereign that we have to consider in answering this question: it is also the ever-varying value of the commodity contained in each of those units, thus so precisely defined, that must be taken into account.

This point is so important, so fundamental in its bearings on the whole question under discussion; and moreover, it seems to be so uniformly ignored in practice that I am constrained to consider it at somewhat greater length.

Political economists who insist that gold is more stable than other commodities, and who attempt to account for the remarkable fall of prices during the last seventeen years, throughout all gold-standard countries, on the theory that gold does not change in value, but that all other things do, appear to lose sight of the fact that this long-continued downward movement of prices, which has baffled and perplexed theorists and statesmen, and set at naught the business canons of merchants, manufacturers and capitalists in the western world, is practically unknown in the east or in silver-standard countries.

The average ratio of gold to silver in the London market for the ten years preceding 1873, as expressed, for convenience sake, in U. S. decimal money, and in terms of pure metal, would make an ounce of fine or pure silver, worth about $1.33 in gold. In 1873 silver began to fall, or gold began to rise, and the divergence has been going on steadily till the present price of silver is about 95 cents per fine ounce, showing an *apparent* fall (as compared with gold) of over one-fourth of its value, or nearly 29 per cent.; which, if it had been a *real* fall,

and gold meanwhile had remained constant to commodities, *would have involved a rise in silver prices, in all silver-standard countries, of considerably more than one-third, or very nearly 40 per cent.* This is, I think, a logical alternative from which there is no escape. But this great rise, or anything like it, *has not taken place.* On the contrary, prices in silver countries, according to evidence laid before the Royal Commissions of Great Britain, have remained fairly steady, with perhaps a slight fall in certain articles.

But there has been one notable exception: gold alone has enormously advanced in those countries, thus demonstrating, by the clearest possible testimony, to-wit, by actual experiment, or, by the actual course of events, that silver has remained truer to commodities and to all property, or has been a vastly steadier and juster standard of value than gold.

The mass of evidence on this point now before the world, as presented by the Royal Commissions and by many other authorities, is cumulative and irresistible. The only important economic change which has seriously disturbed silver-standard countries in recent years has been the remarkable, and to the people of those countries, wholly unaccountable rise in the value of gold. When it is explained to those people that western nations *prefer* gold, and that that very preference, by increasing demand, has been the cause of its great rise, they still wonder, why a high standard, which means low prices of all other property, should be preferred to a steady or constant standard, like their own, which has caused no unusual disturbance in values, by its fluctuations, as gold has among western nations.

Ricardo's Maxim.

One of the maxims taught by Ricardo, was, that money measures the value of commodities, and reciprocally, commodities measures the value of money.

A thorough comprehension of this subtle principle enables one to read price-tables both ways: i. e. to recognize that prices not only represent the money value of commodities, according to the obvious, popular interpretation; but that they also accurately indicate the relative value of money as compared with each commodity quoted.

This habit of reverse-reading of prices is exceedingly useful, and should be followed by everyone who desires to fully grasp the fundamental principles of monetary or economic science. One of the practical benefits the student of money derives from its practice, is that he thereby becomes more and more saturated with the truth, that all money-standards are variable measures of value.

It is the very common practice of many reputable economists to speak of the great tendency to fluctuate of all commodities except gold, thereby implying that the latter does not change. It would be about as absurd to talk about the motion of the heavenly bodies around the earth, if thereby we assume that the earth is immovable, because to us, who are on it, *it does not appear to move.*

Such illusions vitiate the reasoning of all who indulge in them, and preclude the possibility of arriving at right conclusions.

Reading Prices Both Ways: Experience of California.

During the paper-money era in the United States, from 1861 to '79, the people of California, who, ignoring Gresham's law, adhered to gold as their standard, in preference to the cheaper paper money, had a useful experience in this matter of reading prices both ways; for they were compelled, in their business dealings with the rest of the conntry, to know daily the constantly varying ratio between the paper-standard and the gold-standard; in other words, it became a practical business necessity, during all of that period, for them to be able to compute correctly the gold value of the paper or "greenback" dollar and the paper value of the gold dollar. Thus, when greenbacks and National bank notes fell to fifty cents, the correlative value of the gold dollar was two dollars in paper; that is the ratio of .50 to 1.00 is the same as $1.00 to $2.00; or, when gold went to 2.85, the paper dollars were only worth 35 cents, thus: 285 : 100 : : 100 : 35 +; and business men on the Pacific Coast received and paid them out at that, on whatever the current rate might be, till January, 1879, when specie payment was resumed, and their value was restored to par. And thus Californians acquired a ready facility in computing, *from both standpoints*, the relations, as they constantly varied, between the two kinds of money.

Many good people in the United States, legislators and economists, during that era, at first insisted that their paper-money standard did not change: that it was only gold that changed; which would have been as if a person, going up in a balloon and seeing the world sinking away from him, should believe that the little floating world in which he then happened to be, was immovable, and all other things were constantly changing their positions.

Ricardo's Maxim Applied to the Gold-Standard.

Applying Ricardo's maxim cited above (which may be construed as a suggestion that the student of money should read prices both ways), to the gold-standard, which seems to be considered by large classes of people, as a virtually non-fluctuating measure (on the same general theory, apparently, that the meter is held to be a measure that does not vary), we find:

(1) According to the computations of three eminent authorities, as collated in Wells' "Recent Economic Changes" (pp. 115, 121-2, 200), and substantially corroborated by other standard statisticians, that the average fall in the gold prices of leading staple commodities of the world, during a given period, was about 28½ per cent., thus:

According to
Sauerbeck, 1866-76 to 1885–6, they fell from 100 to 69;
"The London Economist," 1872 to '85–6, they fell from 100 to 70;
Soetbeer, 1871–5 to 1885–6, they fell from 100 to 75½; or, an average fall from 100 to 71½, or 28½ per cent.

(2) During the same period, 1870–3 to 1886, silver measured by gold fell from 100 to 75, or 25 per cent.

Supposing the divergence between gold and silver to have been as above, and measuring commodities by silver, the fall in the prices of commodities would have been less than 5 per cent., instead of more than 28 per cent.

(3) But prices in India, according to testimony given before the Royal Commission on Gold and Silver, showed but slight variations during the same period, or even as late as 1888.

(4) Gold measured by commodities, or by a multiple-standard, rose,

(*a*) According to Soetbeer, 32 per cent. The mathematical correlative of a fall from 100 to 75½, would be: 75.5 : 100 : : 100 : 132+;

(*b*) According to the "London Economist," 42 per cent.; 70 : 100 : : 100 : 142;

(*c*) According to Sauerbeck, about 45 per cent.; 69 : 100 : : 100 : 145, nearly.

From 1886 to 1888, there was a further decline in silver, whilst commodities remained comparatively steady.

On the 19th of May, 1888, silver was quoted in the London market at 41⅝ pence per ounce .925 fine; and in New York market, at 91 cents per ounce 1000 fine, which would make the ratio of value of gold to silver as 22.65 + to 1; and would indicate a fall in the gold price to silver, from the average ratio of the ten years prior to 1873 (15.53 to 1), of nearly 31½ per cent., or from 100 to 68½; or, con-

versely stated, a rise in the silver price of gold of 45¾ per cent., or from 100 to 145 +, which is the widest divergence between the two metals in the world's market, that was ever known.

Since 1888, silver has risen one or two pence per ounce; or, the strained relation between gold and commodities in the west, has slightly relaxed, causing a fall in gold or in the gold-standard, which of course can only register itself thus in an *apparent* rise of silver, by one or two points.

But what need is there of further elaboration of the proposition, that all standards of value, that is, the measuring functions of all units of value, constantly fluctuate?

As, in the nature of things, this is inevitable, the suggestion comes to us naturally enough, that our only remedy lies in the direction of a reduction of this fluctuation to a maximum.

When the imperfection of the ordinary pendulum revealed itself, an approximate remedy was found in what is known as "the grid-iron pendulum," which marks seconds with a good degree of precision.

So in measuring value: if an absolutely unchangeable standard is unattainable, experience has demonstrated, that it is at least possible to devise one that will minimize those changes.

We have seen that through the wise policy of France, silver and gold were held with marvelous uniformity, at a fixed ratio, in spite of stupendous disturbances, for nearly a century; and that the standard thus evolved from its dual bases, remained constant in its relation to commodities, notwithstanding those disturbances, throughout all that period, in a way that was surprising.

The experiment of France, in solving in a practical way, the pressing problem: What shall the world do for a stable standard of value? is worth volumes of argument.

In view of the splendid results of that experiment, and of the economic disturbances which have grown out of its temporary abandonment since 1873-4, we are led to make the inquiry:

By which of the following modes could the wealth, which has been created during the last seventeen years, have been most equitably or justly distributed, namely:

(1) By means of heterogeneous barter;

(2) By means of the gold-standard;

(3) By means of the silver-standard;

(4) Or, by means of a bi-commodity, or bi-metallic standard, similar to that which France maintained in full force and effect from 1803 till 1873?

By the first method, the distribution, though slow, would have been just.

By the second, we have seen how said distribution has been immensely vitiated in the west by the rise of the measure (gold), used as a distributing medium, of over 40 per cent., as compared with its former relation to commodities in general.

By the third method, we can see how in the east there has been no serious fall in the measure (silver) used, or rise in prices; and that the distribution, being effected thus without change in the medium, must have been made by normal or natural processes, and therefore must have been made equitably.

By the fourth method, the standard, being linked to both silver and gold, might have advanced slightly above the level silver alone has maintained during the period named; but it certainly would not have gone up 40 per cent. as gold alone has done: and the western world would have been saved from the disastrous fall in prices which has been the direct result of its adherence to the single gold-standard.

If then this last mode of effecting exchanges—to wit, by means of a double standard—worked well for France and its monetary allies, for a long time, and besides, benefited the world at large, by preserving the monetary equilibrium between the gold and silver standard countries; and if, as is almost certain, it would have worked equally well during the last seventeen years, or, at any rate, with vastly less friction and less disturbance than the single gold-standard has done, with its terrible dislocation of prices; why should it not also work beneficently in the future both for those nations which adopt it, and for those which do not?

And why, it may be asked in this connection, if the adoption of the double-standard by France, and adherence to it for many decades, was profitable to the people individually, and to the nation as a whole, should there be any reasonable cause for fear, that if a convention of leading commercial nations should adopt bi-metallism, they would not adhere to it, when, if the foregoing reasoning be true, it would plainly be more profitable to adhere to it than to abandon it?

Is it ever thought necessary that nations or individuals should give bonds that they will buy in the cheapest market?

Has it not been more profitable for silver-standard countries to have paid for the specie they have needed in late years, in commodities at 95 or 98 or 100, than it has for gold-standard countries to have bought their specie, with commodities at 69 or 70, by exactly the difference between the quantity of commodities delivered, in proportion to the amount of specie bought?

Paper Representatives of Specie.

The deposit of equal legal-tender coins of gold and silver, in vault or warehouse, and the use in their stead, of their paper representatives as money, greatly facilitates the interchangeability of functions of the two metals. By this means, the last or nearly last vestige of difference in weight or portability is elminated from the dual species. And thus it becomes, in the vast body of transactions, both of government and people, a matter of indifference to the consumer or buyer or user ot money, which, in truth, as a rule, he never sees, which metal this paper represents, provided that the gold or the silver it calls for be of standard weight and fineness, and will fully and satisfactorily perform the service he requires of it; and provided also, that he gets (as in the case of everything e.se he buys), a standard article at the lowest price.

Nevertheless, as materialization of the real specie, which paper money represents, in every system, is always imminent (and rightfully, too,) and, as in the last analysis, under a bi-metallic, alternative standard, the true signification of money contracts must be revealed, it becomes a matter of the first importance, that there should be no misunderstanding or chance for equivocation, by government or people, by debtor or creditor, at any time, as to

(1) Which metal is to be delivered in acquittal of contracts, entered into under bi-metallic law; and

(2) Whether the option, does or does not belong, by express implication, in all cases, unless waived, to the obligor or debtor;

(3) Which specie, in case of difference in value, shall be the true and legal standard; and

(4) Whether the value of standard coins of either metal may ever be tampered with by restriction or suspension of free-coinage; and

(5) Whether, according to the true theory of money, the functions of the State or the Government, should not be strictly limited, in the coinage of standard money, to the proper and accurate "gauging, weighing and certification" of the coins issued?

These points, which seem so plain as not to need elucidation, are yet very important, because, to a large extent, the stability of the bi-metallic ratio depends on their observance.

The theory of the alternative standard, by fair implication, I hold, assumes that all values are to be measured by the lower of the two commodities constituting the standard; that in accordance with the well-known law of self-interest, which is analogous to that other law, that motion is along the line of least resistence—and both these are like

that law which Gresham discovered—when men are entitled to an option (and that option is clear and explicit), as to which of two commodities they shall deliver in satisfaction of a contract, they will, as a matter of course, deliver the cheaper.

To *not* do this, is to reverse the ordinary natural law of human action.

And this brings us to the consideration of the question of

Genuine Versus Illegitimate Bi-Metallism.

The first of these is based on the operation of natural law, and under it, each specie has its own and never a borrowed value.

The second, ignoring the law of self-interest, arbitrarily adopts the dearer specie, making that the standard, and by thus increasing the demand for it, directly contributes to its appreciation; and as its accelerated upward movement thereby separates it farther and farther from the lower specie, the latter can only be kept at par, by first suspending or limiting its coinage, thus creating "a corner" on the (lower) specie already coined, and then, by making the cheaper coins receiveable for the same things that the appreciated coins are received for—which is not different in effect from making them interchangeable—the lower specie, thus by wholly artificial means, is maintained at par, at a fictitious value; the grand mass of the metal to which it belongs thereupon ceases to have any influence whatever on the standard, which latter is thereafter based wholly on one metal, and that the wrong one; and the result is a purely mono-metallic standard, differing from the ordinary mono-metallic standard only in this: that it includes "*token*" *unit* coins, in addition to "token" fractional coin.

To call such a system of money bi-metallic, in the sense that it is a bi-commodity measure of value, is to mis-name it: such nomenclature is altogether mis-leading; it is simply bastard bi-metallism; it rests solely on one metal, and uses the coins of another metal, at an artificial and not an intrinsic value, as subsidary coins only. And although names count for but little, it would be better to call money systems of this kind what they really and truly are, single-standard systems.

The monetary systems of the Latin union and the United States at present belong to this class: that is, the measuring power of their coins—*both species*—is determined exclusively by the commodity value of gold, and not at all by the commodity value of silver.

It is perfectly evident that silver has had no appreciable influence on the standards of those countries since 1873–4, from the fact that,

as gauged by those standards, its price has constantly varied: whereas, if the standards had adhered to the lower specie (silver), of course the price of silver would not and could not have shown any fluctuations in price, whilst it (the standard) remained thus on the lower specie. As a matter of fact, when those double-standard countries defied the fundamental canons on which bi-metallism is based, by adhering to their dearer specie; when they severed their standard from all vital connection with the grand mass of silver, they cut themselves off from the transcendent benefits of stability in their measure of values which were attainable under the double-standard, as the experience of France for a hundred years had abundantly demonstrated; and with strange lack of forethought, they allied their fortunes to gold which, like a fickle dame, has played sad havoc with all their material values, causing them to shrivel, whilst, Siren-like, she has beguiled them into the belief that she alone was fair, and that, no matter how the course of events might belie her promises, she alone would always be their friend. And what has been the result?

Western nations, after seventeen years of vassalage to a queen who has grievously misled them, find that their standard is forty per cent. higher, in relation to commodities, than it was in 1873–4, and that it is forty per cent. above the standards of the east to-day; and that all other property except gold, has been subjected to a fearful shrinkage, which shrinkage accuratelly measures the premium they have paid for the use of gold, which, by using silver, they might have saved. Why should they have paid increased quantities of goods for gold alone during all this period when silver, or silver and gold together, would equally well have performed the service they have required of gold, without such an unnecessary waste of their substance?

Do the people of Europe and America think they can afford to pay the enormous premium of forty per cent. on all they possess, to gratify a mere fanciful preference for a particular kind of money?

I think the following truths—which seem to me to be self-evident—are fairly deducible from the theory on which genuine bi-metallism is based:

(1) The lower specie so long as it is the lower, is the true standard and legal measure of value; and its delivery is a substantial acquittal of a bi-metallic or bi-commodity contract;

(2) The explicit, absolute right to deliver either metal, belongs exclusively to the debtor: for such absolute right is inferentially "nominated in the bond";

(3) Genuine bi-metallism is only possible in the same monetary system, so long as the actual standard adheres to the lower specie, and that specie is freely-coinable. *This rule is inexorable.*
(4) The effect of limiting or suspending the free-coinage of either metal, is to change, by that very act, and at once, a double-standard into a single or one-commodity standard; and secondarily, to subject thereafter all values to the fluctuations of that single commodity. Moreover, the limitation or suspension of free-coinage of either metal, is in derogation of contracts entered into under bi-metallic laws, and is indefensible unless it can be clearly shown to be a necessity for the welfare of the body-politic.

It is not denied that by a limited and purely arbitrary coinage of the cheaper specie, the latter (to-wit, the specie, but not the universal commodity,) can be kept at a parity with the dearer specie, or with the standard; and that thus a fictitious "unity of standard" may be secured, which, however, whatever its apparent advantages, is not without its perils.

France and its monetary allies, and several other European countries, and the United States, are at present carrying enormous stocks of over-valued standard silver coins, amounting in the aggregate to over $1,000,000,000, on precisely the same principle that all money systems carry comparatively insignificant stocks of over-valued fractional token coins, which latter, however, have a legitimate use, namely, for change purposes; and as the amount of these is small in each country, there can be no great risk in maintaining them at par at an artificial value, as they are needed in effecting minute exchanges.

But to maintain, for no good reason, except to preserve a purely fictitious "unity of standard" over $350,000,000 of standard silver coins, at an artificial valuation, one-third greater than their legitimate or intrinsic value, as the United States, for example, is now (March, 1890,) doing; with an annual addition of $30,000,000, which may be increased under the Bland law, to $60,000,000, or more, is not altogether a safe policy. Of course, if silver and gold should return to their old ratio, whereby the bullion value and the coin value of the silver dollar would become equal, the danger of having the present fictitious or inflated (gold) value of such a large amount of silver dollars, suddenly squeezed out of them, through unwise legislation or other causes, would have passed.

In the meanwhile, public opinion in the United States, recognizing the palpable incongruity, not to say danger, of adhering to gold, with bi-metallic legal-tender in the statute-book, is divided as to the best mode of exit from the present anomalous situation.

The majority of the people, thoroughly believe in bi-metallism or in the double-standard, which they inherited from their forefathers, though by perverse practice, they have wandered far away from it, but they cannot agree as to the best method of getting back to it, or to any analogous system in which the standard shall be based on both silver and gold, instead of as now on gold alone. If one and a large class of the people can have their way, and a law, authorizing free-coinage of silver as they urge, is passed, there will be a sudden change from the gold to the silver-standard, or from the present 100 cent dollar to the 73 or 74 cent silver dollar (Appendix F), which latter would then become the 100 cent (silver) dollar, that would inevitably produce a great financial shock, unless some preliminary provision should be made to bridge over the existing chasm between the intrinsic values of the two kinds of dollars.

Free-coinage failing, this same class insists that the maximum of $48,000,000 of silver per annum, under the Bland law, shall be purchased and coined. Possibly the absorption, by the United States, annually of that much silver (which, at the present gold price of silver, could be coined into over 65,000,000 standard silver dollars,) would tend to bring the two metals together; though the arbitrary purchase of $24,000,000 annually during the last twelve years seems to have had very little effect in restricting the divergence: for the gold price of fine silver in February, 1878, the date of the enactment of the Bland law, was about $1.20 per ounce Troy; it has since been as low as 91 cents; at the present time it is about 95 cents per ounce. (Appendix G).

The Bland Act, though it has accomplished one of the objects Congress had in view in passing it, in that it has furnished a supply of coined silver dollars, of which the country was bare prior to 1878, (and which it will need if it ever gets back again to the double-standard,) is in some respects a clumsy measure: It establishes no intimate, vital relation between the standard and silver in general, the connection attempted to be established between the two, instead of being automatic, is wholly artificial.

The plan submitted to Congress at its present session, by Secretary of the Treasury Windom, for the solution of the silver problem, so far as one nation acting alone can solve it, is based on sounder principles than the Bland measure.

It recognizes in the first place, that there is a wide difference between the legal-standard (the lower specie), and the actual standard (now the higher specie); and it proposes such a policy as would almost certainly tend to bring the two metals together with the least possible friction or shock, by connecting silver with the standard automatically, first through gold, till their values assimilate: silver to be received at the mint without limit, *at its market value, which*, when it comes up to the legal par (or, when the gold-standard comes back to its former relation to silver), *will be its own value:* Then the connection can be made complete, without shock, or serious disturbance, by the establishment of absolute free-coinage. (Appendix H).

There are one or two other points that,are illustrated by the experience of the United States in practical bi-metallism, which may be of interest in this connection, especially as they show how spurious or illegitimate or bastard bi-metallism or that in (which the standard adheres to the dearer specie), upsets or neutralizes the operation of some of the simplest principles of finance.

As the United States is a large producer of silver, it occurred to the late Dr. Linderman, formerly director of the mint, that by manufacturing a silver dollar slightly heavier than either the U. S. standard dollar or the Mexican dollar, the same might find favor in China, and thereby help to make a market for United States silver. In pursuance of this thoroughly sound suggestion, the coinage of a "trade-dollar" of 420 grains of silver, nine-tenths fine, was authorized by Congress in 1873; and, in all, about $35,000,000 were coined, most of which found ready sale in China, where they were well received, and preferred even to the Mexican dollar, being made a legal-tender at some of the Chinese ports.

As the United States advanced from its paper-money standard towards the specie standard, after the passage of the Resumption Act of 1875, the people made the mistake (perhaps because they had been so long unaccustomed to the use of metallic money of any kind) of adhering to their dearer specie, or to gold; for silver, which had been a legal-tender since 1792, had been, by devious methods, temporarily demonetized during the paper-money era, or from 1873 till 1878; and as by the Bland Act of remonetization, the coinage of silver was limited, of course, gold, in its upward movement, took the standard, and the few silver dollars, then being coined, along with it; when the anamoly was presented of 412½ grain dollars being (artificially) worth more than 420 grain dollars.

This was because the former, limited in number, were practically exchangeable for gold dollars; or, what amounted to the same thing, like functions were conferred on them as on the gold dollars, thereby giving them a gold value.

The trade dollars, not being limited as to coinage, and depending alone on their own intrinsic value, as all standard money should depend, became redundant at home, because they were cheaper than the appreciated standard dollar; some of them were returned from China, as there was a handsome profit in circulating them in the United States along side of the lighter standard dollars; and finally, but for no fault of their own, they became a nuisance, and their further coinage was prohibited.

And so, ingloriously, came to an end, an admirably devised plan for facilitating the sale, in a form that was wanted in China, of U. S. silver, because the domestic monetary policy of the United States was vicious; and Mexico, wiser in her day and generation than her more powerful neighbor, continues to hold the field as a seller of stamped or coined bullion in the east, because her coins, both at home and abroad, have but one value, and that is their simple bullion or merchandise value.

During the present year, a scheme has been broached for the establishment of a Pan-American silver dollar, identical in weight and fineness with the U. S. standard dollar. If that coin rested, as according to the true theory of money it ought to do, on the universal mass of silver, with coinage free, such a proposition might be exceedingly useful, not only to the nations of America, but to the world.

It would have a very solid and steady value, and like the old Spanish-milled silver dollar, might find wide currency and usefulness in many countries.

But to limit its coinage by apportionment, put it on stilts, and attempt to keep it at par with the gold dollar, or with gold in general, by artificial instead of by natural law, would be an exceedingly hazardous undertaking. For values, like water, are ever gravitating towards their lowest level. It is for this reason always unwise and always dangerous to attempt to maintain above their normal level, values of any kind, but especially standard money, by which all other values are measured. (Appendix I).

From the foregoing, and from the general mass of evidence now before the world, it is, I venture to affirm, an indisputable fact:

(1) That England and all countries whose sole standard was gold prior to 1873, have suffered evils, the magnitude of which is beyond

computation, by the great rise of the single article, gold, and the consequent fall of everything measured by gold. It is no sufficient compensation for the distress caused by the universal decline of all property and all industries, to say that there is *one* exception: that, at least *one* commodity (gold) has gone up, even if every other one has gone down.

It is no sufficient remuneration for the losses of the great body of the people, resulting from the increase in the value of gold, and of its measuring power, to retort that at least a select few having fixed incomes, have been greatly benefited.

(2) That the countries which have changed from the silver-standard or from the bi-metallic standard to gold, thus blindly helping to enhance its value from 40 to 50 per cent., have unwittingly been buying money at a *high price*, when they might just as well have bought it at a *low price*; and they have brought on themselves evils growing out of an appreciated standard, by their own voluntary action, which they might easily have avoided. These evils were forced on those nations whose standard prior to '73 was gold; but those countries which have adopted gold since, brought these evils on themselves by their own acts.

Although, in isolated cases, persons and classes may be temporarily benefitted by a 40 or 50 per cent. increase in value of that material which measures value (which means, logically, an increase in its measuring power), as in like manner, certain persons might profit (at the expense of the community at large) by a similar increase of the standard cental or hundred-pound weight to 140 or 150 pounds; or, by the use of an elastic yard-measure that should stretch in the same proportion: i. e. from 36 to 50 inches or more; yet abuses of this kind would not be endured for a day.

Why should the civilized nations of the world tolerate the use of standards of value which fluctuate to this appalling extent, any more willingly than they would tolerate standards of length or weight, that were liable to similar variations in their measuring power, if, as has been unequivocally demonstrated by actual experiment, a remedy or even a partial remedy, is available?

Although the far-reaching and disastrous effect of this great rise of gold, on the material prosperity of western nations, has revealed and is continually revealing itself, with startling and painful clearness, gold partizans or *gold maniacs*, still hold fast to their idol with a persistence that seems amazing.

Gradual Rise of Gold, from Age to Age.

The mere fact that one ounce of gold formerly would do the work as money, of 10 or 12 ounces of silver, caused a preference for gold, which was natural enough.

But therein lurked a great danger: that very preference caused an increased demand which resulted in a rise of gold, till it became 15½ times as valuable as silver, at which ratio it was held by French currency law for a century or more, or till 1874, when the link binding it to silver was severed; and that same preference, based on no substantial reason (for as already noted, the general use of paper substitutes for silver and gold, practically eliminates or neutralizes their difference in weight), caused gold to break away from its old relation to silver and to all other property, and go up to a ratio of 22 and even higher; in other words, its steady and persistent appreciation has made it worth in silver more than double its average value in the XVIth century, when one ounce equalled 11.32 ounces of silver (Soetbeer, Edelmetall-Production, pp. 126 et seq.); whereas, in May, 1888, its market ratio made one ounce of gold worth 22.65 + ounces of silver; with every probability, that so long as leading nations of western Europe and America, persist in following their present fatuous policy of sacrificing stability or constancy of value, to mere convenience in handling or portability (when in fact, modern exchange does away mostly with the actual handling of either gold or silver), it will go still higher, causing a further fall in prices and carrying distress in its upward movements in the future as it has done in the past.

In Soetbeer's tables, just referred to, (see also Laughlin's History of Bi-metallism, appendix II, p. 220,) it is shown that gold rose relatively to silver, in three centuries, from an average of 11.32 to 1, to 15½ to 1, or a little over four points. Whereas, *inside of fifteen years*, from 1873 to 1888, it rose relatively more than 7 points, or from 15½ to 22.65.

In other words, its appreciation in its relation to silver was nearly twice as great in fifteen years as it was in the previous three hundred years!

Can the world look forward with indifference to the time when one ounce of gold shall equal in value 25 or 30 ounces of silver? when

one dollar in gold shall be worth two dollars in silver, or five francs in gold shall be worth ten silver francs; and when that metal (gold) shall have appreciated relatively to all other commodities in a like proportion?

And here we come in sight of the profound wisdom of M. Cernuschi's proposed ratio of 14.95 +, which is, in fact, a practical compromise on the basis of existing bi-metallic systems.

In the first place, it is good for the well-being, for the economic health, of all the world, that a stand should be made against this senseless doubling-up of the relative value of gold, whereby, in effect for a whim, its stability as a measure of value, is destroyed.

It is time to recognize the necessity of adopting a policy that will check this perpetual tendency towards divergence between the two metals, instead of yielding indefinitely to it; for it leads insidiously, but surely, to the unsettling of all material values. It is certainly for the best interests of all nations and classes that the disparity between the working power of the metals should be diminished, within reasonable limitations, rather than increased.

By combining the United States gold dollar with the French silver five-franc piece, as the dual units of a new system, not only a ready mode of connecting the existing money systems of the United States, and of France and her monetary allies with the proposed "just system" is provided, whereby a vast re-coinage is avoided; but a slightly greater efficiency is given to silver over the old 15½ ratio, which France maintained, and which was practically the world's ratio for more than a century.

A proposal to return to 15½ with the expectation that the United States would adopt that equation, would have involved the entire re-coinage of both her gold and silver dollars (amounting at the present time to nearly $1,100,000,000), and a readjustment of her money system, and of all existing contracts made under the same to a new and totally different system.

[The adoption of the gold five-franc piece and the United States silver dollar, as the new monetary units, would, it is true, have connected two existing money-systems with the new system, in a feasible manner; and an immense re-coinage would also have been avoided, as under the proposition of M. Cernuschi: but the ratio, instead of being 14.95 +, or 15, or 15½, or 15.98 +, would have been 16.57 +, an increase over any existing legal ratio, of the disparity between the measuring power of silver and gold, instead of a decrease.]

The ratio of weight, in Troy grains, and in grammes of standard gold and silver coins (nine-tenths fine), of France and of the United States, and also their ratios of value, may be compared thus :

	Gold.	Silver.	
French system	5 fr.	5 fr.	
Troy grains.............	24.89 + :	385.8 +	:: 1 : 15.50
Grammes................	1.6129 + :	25	:: 1 : 15.50
U. S system............	\$1.00	\$1.00	
Troy grains.............	25.8 :	412.5	:: 1 . 15.98 +
Grammes................	1.6718 + :	26.7 +	:: 1 : 15.98 +
"Just" system.........	G. just	S. just	
Troy grains.............	25.8 :	385.8 +	:: 1 : 14.95 +
Grammes................	1.6718 + :	25.	:: 1 : 14.95 +
G. 5 frs. to S. Doll....	5 frs.	\$1.	
Troy grains.............	24.89 + :	412.5	:: 1 : 16.57 +
Grammes................	1.61 + :	26.7 +	:: 1 : 16.57 +

Ratio of value : If 385.8 + grains silver, equal 5 francs, then 385.8 + grains gold, equal 77.50 francs; or, 5 f : 77.50f. :: 1 : 15.50.

If 412.5 grains silver equal \$1, then 412.5 grains gold equal \$15.98; or, \$1 : \$15.98 + :: 1 : 15.98 +

If 25 grammes of silver equal 5 francs, then 25 grammes of gold equal 77.50 francs ; or, 5 f. : 77.50 f. :: 1 : 15.50.

If 1.6129 + grammes of gold equal 5 francs, then 25 grammes of gold equal 77.50 francs ; or, 5 f. : 77.50 f. :: 1 : 15.50.

Since silver and gold have drifted, independently of each other, (i. e. since 1873 or '74) their relative value has varied all the way from 1 to 15½, to 1 to 22.65 +.

The advantages of a uniform legal ratio extending throughout all double-standard nations, between silver and gold, the world has never yet enjoyed. France held the grand masses of the two metals together at 15½ with wonderful steadiness, in spite, not only of enormous variations of supply, but of the existence in other countries of legal ratios, differing from her own. (Appendix J).

If a common ratio and legal-tender are adopted by several, or all double-standard nations, thus organizing or establishing the free-play of self-interest (which seeks to buy the cheaper money), on the same line, instead of on differing and antagonistic lines, so that it would be ad-

vantageous for all to work to the same end, it is not apparent how it could be for the interest of any nation to evade or depart from such a policy.

Assuming that it will be universally conceded that the world's exchanges must be effected, either by means of silver and gold, fluctuating separately and independently of each other, or else by the use of the two, united in harmonic accord; and comparing the practical results of the latter mode, as exemplified, not only in France, but throughout the world, from 1803 to 1873, with the disastrous disturbances of values, resulting from the former mode since 1873, is it not perfectly obvious that western or gold-standard nations cannot afford to longer let the standards drift apart without at least attempting to seek a remedy?

Probably no such general and persistent fall in prices has ever occurred in the world's history in the same length of time, as that suffered by all gold-standard countries during the last seventeen years.

The appreciation of the United States paper, or "greenback" dollar from 35 cents (gold value) in 1864 to 100 cents in 1879, with all its attendant shrinkage of values was, of course, a more drastic local example of the rise of a standard; but its immediate effects were mainly confined within the limits of the United States.

But the rise of gold as measured by commodities and by silver, of from 40 to 50 per cent. since 1873–4, has made its baleful influence felt wherever gold is the standard.

In tracing out some of the incidental effects of bringing silver and gold together at the rate of 14.95, as proposed by M. Cernuschi, and since the body of this essay was written, it has occurred to me that one very important result of such a consummation, will be to change the vast mass of inert, standard silver coin, which now lies encysted or locked up, in the gold and psuedo bi-metallic systems of Europe and America, doing only delegated or "token" work, into active or potential money: in other words, the great body of coined (standard) silver, which the rise of gold in late years has lifted from its former normal level, and from all vital connection with the commodity, silver, would be changed from a negative to a positive force in the monetary world.

The writer has not at hand data, for accurately determining the present amount of this class of silver coin, which formerly, or before the great disruption of values, caused by the scramble for gold, did efficient monetary work in virtue of its own inherent power; but

which now is reduced to the insignificant role of token money, and is being carried (in a state of crippled inefficiency) by the monetary systems of the west, at an artificial or gold valuation. But it must be very large. Dr. Soetbeer, in his "Materialien," (reproduced in appendix to Report of Gold and Silver Commission, pp. 202 et seq.,) estimates the monetary stock of legal-tender or 5 franc silver coins of France alone, at the close of 1885, at 3,000,000,000 francs, or $600,000,000; and of other European countries and their colonies, at about $185,000,000 more, in addition to their small coin.

The United States at the present time, has over $350,000,000 of standard silver dollars. Other countries are carrying considerable stocks of similar full legal-tender silver coin. So that not less, probably much more, than $1,000,000,000 of silver now lying dormant, or only performing the insignificant function ot token-money, would at once become effective money, measuring value by its own instead of by a borrowed (gold) value.

This silver, whatever the amount, is almost as effectively lost as an active force in the monetary world as it would be if it were transported to China. If western nations have shut up a billion dollars, more or less, of silver, thereby causing it to become dead money; and have absorbed since 1871 an equal amount of gold, as estimated by Mr. Goschen in 1883, to make good the deficiency (Report Royal Commission, appendix, p. 210,) no wonder there has been a fearful disturbance in values.

To use all these full-weight silver coins, merely as "counters" to represent gold, as gamblers use ivory "chips" to represent coin, in addition to the large aggregate amount of fractional silver which is needed by the world for change purposes, seems excessively wasteful.

This waste of money-force may be brought to an end by a return, or an approximate return, to that state af affairs which, prior to 1873, had endured for a century, and on which the money-contracts of a century were based.

The adoption by several leading commercial nations of the former ratio of 15½ or, better still (for reasons already assigned) of the ratio closely approximating to it, of 14.95 +, as proposed by M. Cernuschi, would assimilate the values of gold and silver (by bringing one metal down, or the other up, if gold-partisans prefer to put it that way,) so that the standard silver coins of the west, like those of the east, would rest securely upon their own and not on a borrowed value; and thereby a billion or a billion and a half dollars of idle capital, which the world cannot afford to let lie idle, would be revivified and made an active force, to aid in the world's material development.

Would the effect of the conversion of this, at present, practically inert hoard (i. e. inert so far as its own measuring capacity is concerned), into potential money, in its own right, be greatly different from the addition of an equal amount of new silver from the mines? Indeed, being already coined, would not its influence be more quickly felt on the industries and commerce of the several countries owning it, as well as on the industries and commerce of the entire western world, than would the sudden production of that much crude ore or bullion?

[An equation based on the gold five-franc piece and the silver dollar, and the assimilation of the two metals to that ratio (16.57 +), would, in effect, leave the entire mass of standard silver coins of the Latin union, and of all other nations maintaining the same ratio—in other words, the immense amount of silver-franc coins of Europe—in their present ineffective condition of tokens, or flunkies of gold; for if a coin of 412½ grains of silver became one of the dual units of a general bi-metallic system, of course, a coin of 385.8 grains would be of inferior value; and it could not be recoined or melted down without loss: therefore, it would remain as it now is, in a state of limbo—otherwise, in a condition of useless inactivity or impotency.

Of course, the bringing of gold and silver to a parity at the latter equation, would cause all the standard dollars to become active money, as in the former equation, because, in this latter case the new silver unit would be identical with the U. S. silver dollar.]

The benefits which would accrue, not alone to the countries of the so-called Latin union, but to the world, from the adoption of a policy that would again make useful as an efficient force, the silver "franc" money of the world, as proposed by M. Cernuschi, should not be considered an innovation, but rather a return to a former state: as a step, in a sense, demanded by the equities of the case. Moreover the restoration of more than one thousand million dollars of coined silver to activity and vitality, in its own right, would certainly benefit not one nation only, but all the world.

Adjustment of Existing Money-Contracts to the "Just" System.

The principles involved in a change from existing monetary systems, and in the adjustment of contracts made under them, to the "Just" system, are comparatively simple.

The obligors in those contracts agree in substance, to deliver certain numbers of grains or grammes of silver, or of gold, of standard fineness; or, of either metal, at their own option; and, of course, in

changing the legal units by which this shall be done, scrupulous regard for the equities of the old contracts must be observed, in providing for their liquidation in terms of the new system.

These principles have received practical illustration in the German monetary laws of 1871 and 1873. Unquestionably the law of equivalence in the new payments, must be strictly followed : for the rest, it is mainly a question of clerical computations.

The United States.

Whenever the United States adopt the "Just" system, and the par of 1 to 14.95 + is established in the market value of silver to gold throughout the world, all existing contracts for the payment in "dollars" (where the kind of dollars are unspecified), can be legally and equitably liquidated, first, in gold "justs;" because that coin will be identical in every particular, except in name, with the gold dollar; and second, whenever silver "just" coins (of 385.8 + grains, or 25 grammes,) can be freely exchanged for gold "just" coins; or, whenever uncoined bullion of the former, of standard weight and fineness, is exchangeable at the par of 14.95 +, for the uncoined bullion of the latter, every debtor can practically, if not technically, pay in silver justs.

Whenever the substantial equivalency of silver and gold shall have been maintained for a reasonable length of time, say six or twelve months, such contracts might be made legally payable in either gold or silver justs. The reasons for this are: the contracts were originally payable in *either* gold dollars of 25.8 grains each, or in silver dollars of 412.5 grains each. But as in the case supposed, 385.8 grains of silver, coined or uncoined, will have become equal in value to 25.8 grains of gold, coined or uncoined, no hardship or injustice will be imposed on the creditor, if the law ordains that after the new par shall have become firmly established, the old contracts may be made payable in either gold or silver justs: for it will not be for the interests of any class, either debtor or creditor, to perpetuate indefinitely, within the same jurisdiction, two radically differing monetary systems.

If 385.8 grains of silver should become equal to the gold dollar or gold just, 412.5 grains of silver would be worth nearly seven per cent. more, or $1.07.

And if the creditor received the cheaper (gold) dollar (just), or its equivalent in value, the contract would be fully and righteously satisfied.

In the contingency that silver and gold, as commodities, should not be brought substantially to the par of 14.95; or, in case that they should not remain there, it might be expedient to ordain somewhat as follows:

(1) Contracts for the delivery of money, made *after* the legal adoption of the just system, shall be payable in justs of either metal without limitation, at the obligor's option;

(2) "Dollar" contracts shall be payable,

(*a*) In gold justs, or

(*b*) In either gold or silver justs, when (within some reasonable time), the course of events shall have given assurance of the probable stability or permanency of the new ratio.

As a further illustration of the principles herein involved, it may be useful to point out the legal significance or meaning of that class of contracts which men enter into, in which they agree to deliver specific quantities of either of two commodities—which is literally what dollar, franc and like contracts are. The strict letter of these contract is found,

(1) In the contracts themselves; and

(2) In the public statutes, which define in exact terms, what constitutes dollars, francs, etc.

An agreement to pay, for example, $100, is substantially a promise to deliver, either

100 times 25.8 grains of the commodity gold, or 2580 grains; or (at the payer's option),

100 times 412.5 grains of the commodity silver, or 41250 grains; both metals to be of standard fineness.

Of course, these commodities must be gauged and certified to, and fabricated into merchantable form (coin), which means their most convenient and most reliable form for general use, by the National Government.

Under the constitutions and laws of most countries, the government is made the public "weigher and gauger" of the precious metals (Appendix K); and it can only do this effectively and reliably by assaying, refining, weighing and fabricating the metals into convenient forms for use (coins), observing in every step the utmost care and precision, in order to prevent the possibility of fraud: for these coins are to be used in turn both by government and people to measure other values by.

But the delivery, in the case cited, of the precise quantity of standard metal called for, is the main element of the contract: the

matter of its being coined being only of secondary importance. As a matter of fact, uncoined bullion is often used and preferred in the settlement of international balances.

The essence of contracts to deliver gold and silver, or either of them, consists or should consist, in the agreement to transfer definite quantities of silver or gold bullion, or the ownership thereof, or the values which inhere in them as commodities or as articles of commerce. And the implication in the original contracts, to that effect, in the above example, could not, or ought not, to be more binding (even if they are thus made a trifle more explicit), if expressed according to the forms I have given. But juggling-coinage laws in recent years, in professedly double-standard countries, have defeated and rendered of no effect those implications, so far as silver is concerned.

A silver dollar signifies, or should signify, 412½ grains of silver, nine-tenths fine, carved out of the average mass of silver in the world, having, by implication, the same value as every other 412½ grains of the grand mass. Instead of having that honest value, and doing honest work therewith as money, it is increased in value, by perverse legislation and perverse practice, the moment it is coined (at the present time) more than 36 per cent! or, from a (gold) value of less than 73½ cents to 100 cents gold, and thereafter becomes the flunky of gold, and no longer does work on its own account.

The 25 grammes of standard silver, of the silver five-franc piece, in like manner in theory are supposed to have substantially the same value as every other 25 grammes of the average mass. But instead, this value is increased artificially about forty per cent. by the mere process of coining.

France.

In providing for the liquidation, under the "Just" system, of money contracts payable in "francs," the same general principles should govern as in contracts payable in "dollars." In both cases, the adjustments from the old to the new, would be by analogous methods: for the gold dollar and the gold just on the one hand, and the silver five-franc piece and the silver just on the other, would be respectively identical in all respects except in name.

Legally and morally a contract to pay, say 1000 francs, means a promise to deliver, either:

1000 times .32258 + grammes of the commodity gold or 322.58 grammes; or (at payer's option),

1000 times 5 grammes of the commodity of silver, or, in all, 5000 grammes; both of standard fineness, and, of course, in the ordinary merchantable or coined form.

The significance of the same contract might be expressed in Troy grains thus, the debtor in said contract in effect, agrees to deliver:

1000 times 4.97817 + grains, or in all, 4978.17 grains of gold; or, at payer's option

1000 times 77.1617 + grains, or in all, 77161.7 + grains of silver, each of standard fineness, etc.

Of course, as the silver five-franc piece and the silver just are identical in weight and fineness, all franc contracts would be payable in silver justs, five of the former being counted for one of the latter; 200 justs being the exact equivalent of 1000 francs.

If the silver just should become equal in value to the gold just of 25.8 grains, of course the gold five-franc piece of 24.89 + grains would be of less value (about 3½ per cent.) And under a strict or technical construction of legal right, a debtor might, perhaps, claim that he should still be entitled, after the charge of systems, to the option of paying a debt, contracted in terms of francs, in the cheaper gold five-franc pieces, or their equivalent in standard gold, thus:

1000 frs. in gold of 4.978 + grains equal	4978. +	grains,
1000 frs. or 200 gold justs of 25.8 grains equal	5160.	grains.
Number grains gold in excess of 1000 frs.	182.	grains.

Which would equal 36 francs 59 centimes.

Whilst the debtor should not, of course, be required to pay in liquidation of a 1000 fr. contract 36.59 fr. more in gold than he promised to pay, he certainly would have no cause for complaint, if compelled to pay the number of grammes, which he agreed to deliver, of silver, which would have been precisely the metal he would have used if the change had not been made.

Of course, all money contracts entered into after the legal adoption of the just system in any country, would be payable in either metal, without regard to what their relative market value might be.

Germany.

Existing contracts in Germany payable in gold marks, could be connected with the just system by means of the commodity of gold, which is common to both systems : it would only be requisite to compute the equivalence in weight in "justs" of the gold called for in contracts made in marks (the fineness of standard gold being the same in both systems), which would be merely clerical work.

A contract to pay 1000 marks, signifies an agreement to deliver 1000 times 6.14589 + grains, or, in all, 6145.89 + grains of standard gold (nine-tenths fine).

If made payable in gold justs of 25.8 grains each, the equivalent sum would be: 6145.89 + divided by 25.8 equal 238.21 + justs.

This would be an exact or absolute compliance with the essence of a contract to pay 1000 marks.

Thus: 1000 marks equal 6145.89 + grains standard gold; 238.21 + justs equal 6145.89 + grains standard gold.

In grammes: 1000 marks signify,
1000 times .3982477 + grammes of gold, nine-tenths fine, or 398.2477 + grammes; which divided by 1.6718 + equal 238.21 + gold justs, as before.

How long a time, after the establishment of the gold and silver just ratio,—14.95 + to 1—ought to pass before debtors should be given the legal right, without the consent of creditors, to liquidate old debts in silver justs equally with gold justs, would, and should depend upon the government's best judgment.

Sound public policy would indicate that, as soon as might be, after the values of the two metals in the world's market, should have adjusted themselves to the legal ratio, and an abundance of the new coins should have been provided, the old (standard) coins should be withdrawn; as the concurrent circulation of coins of similar but slightly differing value, as experience has often demonstrated, is liable to cause more friction or confusion (by reason of their liability to be confounded with each other) than if the difference in value of such standard coins were so great that there would be no disposition on the part of the people to use one for the other.

England.

All contracts for the payment of English money means that every pound sterling calls for the delivery of 113.0016 + Troy grains of the commodity pure gold.

The adjustment of these contracts to gold justs, on the principle of equivalency, of fine or pure gold, should not be a difficult matter. And after the market par of 14.95 + to 1 shall have been established, and shall have become reasonably stable, as it must if the "Just" system is concurrently adopted in good faith by the four great commercial nations, England, France, Germany and the United States, under the belief on the part of all of said powers, that each nation would be more benefitted by adhering to the principles on which that system is based, than by departing from them, complete adjustment of sterling contracts to the new system, could be provided for on the principle of equivalency of value or ot purchasing power of the two species, without injustice to anybody.

One hundred pounds sterling mean 100 times 113.0016 + grains fine gold, or 125.5774 + grains gold, nine-tenths fine, which would give 12557.74 + grains: this divided by 25.8, the number of grains in a gold just, would give 486.66 +.

Therefore 100 pounds sterling would equal 486.66 gold justs, or, what is the same thing, 486.66 gold dollars.

The adoption, by the three great European powers above mentioned, of the "Just" system, would undoubtedly result in the extension of the same system to their colonies, thus practically establishing a uniform ratio between the two metals throughout the world.

LOS ANGELES, CAL., U. S. A., April 2, 1890.

APPENDIX.

A.—The charge, often made, that one or the other of the money metals is, or can be "degraded" to a commodity, if my theory is sound, has no significance or force. Both these metals are simply commodities, whether used as money or not: even their outlawry in this capacity, or "demonetization" as it is called, in certain restricted localities, does not prevent the greater portion of the human race from still availing themselves of this commodity use of the precious metals, which use they will doubtless always insist is one of their most important commodity uses.

B.—Precisely as the *new* and largely increased use of gold as money (and practically as a sole standard), since 1873, by western nations, to-wit, by Germany, Scandanavia, the countries of the Latin Monetary Union, the United States, etc., or, by nearly 200 million people, has enormously enhanced the value of that metal; and just to that extent disturbed its measuring power as a distributor of wealth. That gold, being the standard in those countries, does not and cannot show its own rise (except by a general fall of prices, which is the synonymous term for a rise of the standard,) in no respect alters the fact that there has been an enormous advance in the relative value of gold, as compared with commodities in general, since 1873, as many eminent statisticians have conclusively shown.

C.—Thus, if in an isolated, rural community, the people should use wheat, corn or some other grain as a medium and standard of exchange, the market price of all other things measured by that standard, would, of course, constantly show variations. But it would be a superficial and wholly unwarranted deduction to assume that only the things measured changed in value, and that the article conventionally or arbitrarily used as a standard, did not change. And this would be true of any article whatsoever that might be used as a common measure of value. For, after all, value is but the relative estimate men place on good things; and that estimate must perforce, from an infinite variety of causes, constantly vary. *The length of a meter* is absolute, exact, and never changes. *The value of a dollar*, or of a pound sterling, depending as each does, and as does each thing either buys, on the judgment or whim or estimate of mankind as to its relative desirability, never ceases to change.

Men—sometimes *learned men*—fall into grave errors in this matter from two causes:

(1) They confound ever-varying standards of *value* with never-varying standards of *weight*, *extension*, etc.; and,

(2) As a standard of value does not and cannot, except indirectly, reveal its own fluctuations; in other words, as its movements are veiled, they assume that it does not change, which is contrary to the fact and to the most rudimentary teachings of political economy.

D.—Since these paragraphs, in the text of the essay, were written, their truth has been most strikingly illustrated in the startling crisis which culminated in London, on the 14th day of November, 1890, and later in other parts of the world where gold is practically the sole standard.

To avert an impending financial cataclysm, the extent and destructiveness of which no man could forecast, the Bank of England, the custodian of the reserves of all the banks of the United Kingdom, was compelled, with the aid and indorsement of the British Government as surety, to borrow about twenty-five tons of gold from the Bank of France. This was the hard alternative of permitting one of the leading banking institutions of the kingdom to "go into liquidation;" and possibly of dragging the Bank of England itself and other large financial institutions into the same remorseless vortex. And all this, because the English people will insist, not only on using a single metal wherewithal to effect their vast exchanges, but who also insist that they will only use the *minimum* amount of that one metal, the growing scarcity of which (in proportion to demand), is constantly staring them, and all gold-using countries, in the face. One is impelled to ask: what would have happened if the policy of the Bank of France had been modeled after the English plan, of gold-mono-metallism, pure and simple, with no surplus which it could safely loan to any foreign bank? Where else in all the world could $15,000,000 in gold have been found, in default of which the Barings, and possibly the entire banking system of the foremost commercial nation of the world, must have collapsed.

Suppose on the heels of the Baring disaster a second large appeal for aid had been made to the Bank of England. What then?

A writer in the *Fortnightly Review* for December, 1890, in quoting the *Economist's* estimate that the total deposits of the whole of the banks of the United Kingdom are about £600,000,000 ($3,000,000,000), makes the astonishing statement (p. 952) that the Bank of England's reserve, "upon which the liquidation of the whole of these deposits practically depends," only "ranges from 1½ to at the outside 3 per cent. of their amount." And, as the writer very truly asserts: "For the whole banking system of the country this reserve is therefore a trifling security."

If "liquidation," which English financial writers are not backward in preaching to other people on occasion, should happen to be forced upon English financial institutions by the course of events, and by the scarcity of gold, what would be the outcome?

Undoubtedly the banks of England control enormous wealth; but that they are short of gold, and that this shortage comes fearfully near the danger line in abnormal times, is evidenced by their late heavy borrowings, which, it is understood, must soon be returned.

Considering the immensity of the contracts made daily, and maturing daily for the delivery of money, in any country, and especially in a highly commercial country like Great Britain; and considering that the two commodities, gold and silver, were held at a substantial parity at a fixed ratio for a century, by natural law, supplemented by wise human legislation, is it not perfectly obvious, without argument (except, perhaps, to those somewhat narrow-minded but intensely prejudiced persons known as gold-mono-metallists or gold-mono-maniacs), that that money system which is able to practically measure identical values by using either one of two universal commodities, is better and safer and more stable than a system which depends exclusively and absolutely on one?

E.—In working out the theory of the great "Object-lesson" furnished to the world by France, from 1803 to 1873, strictly on the lines I adopted and wholly without regard to extraneous results, I was agreeably surprised afterwards to note how effectually and, as I think, satisfactorily, by rigorously logical reasoning, I had accounted for the widely-known and very significant fact, that the French nation possesses and long has possessed, by far the largest amount of metallic money *per capita*, of any nation in the world.

F.—Since the passage of the silver-purchase law of July, 14, 1890, by the United States, the gold price of silver has varied greatly. Of course, in view of the exciting scramble for gold which Europe and America have been engaged in during the last three months, it would be altogether erroneous to charge these variations wholly to silver or to speculation in silver. It is said that the level-headed people of Holland many years ago adopted silver as their standard in order to free it (their standard) from the fluctuations of gold caused by the vast stock speculations of London.

Of course the adoption of free-coinage by the United States will temporarily bring our standard to a silver basis; and if this is brought about whilst the gold price of silver is much less than 1.29 + per fine ounce, serious disturbance will result, growing out of the sudden change of standard from our higher to our lower specie, from which latter we never ought to have parted. But the adoption of silver, or the lower specie as the standard, thus liberating nearly $700,000,000 in gold, would soon cause gold to fall to a parity with silver, were it not that a vast aggregate of promissory notes are out, specifically payable in gold, or its equivalent in value. If, however, the great body of exchanges of the country shall be effected in silver, the tendency will be strong to bring the two metals together. If this shall be accomplished, the hardship of paying specific contracts in the equivalent of gold will disappear, because silver will then have become the equivalent of gold at the legal ratio.

G.—The very serious fall in the gold price of silver since 1873–'4, I hold, is in fact mainly a result of *the great rise in the value of gold*, caused by the new demand for gold as a standard, or as money, by two hundred million people since that date. I have assumed this to be the true explanation of the startling divergence which has arisen in late years, between the two metals, throughout this essay, as all who have followed my reasoning must doubtless have observed. Indeed, all the facts agree with this theory, which facts may be briefly summarized, thus: (1) Staple commodities measured by gold, have fallen greatly; (2) silver measured by gold has shown nearly the same fall as commodities; (3) but, commodities measured by silver, instead of showing a rise, have shown a slight fall; (4) gold measured by silver has risen greatly; (5) but measured by a multiple-standard or by the world's staple commodities, gold has risen enormously, whilst silver, by the same multiple-standard, has not fallen at all: on the contrary, it has risen slightly.

Not only can every one of the foregoing five propositions be conclusively established theoretically by computations based wholly on prices in gold-standard countries, but actual market prices in silver-standard countries abundantly fortify and corroborate this theory beyond any reasonable doubt. In other words, the theory that *gold has appreciated*, fully accounts for and harmonizes with every one of those propositions; whereas, the theory that there has been any *serious fall in*